Foreign Agricultural Service
GAIN Report
Global Agriculture Information Network

Required Report - public distribution

Date: 9/9/2002

GAIN Report #SF2022

South Africa, Republic of

Planting Seeds

Annual

2002

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Report Highlights:
In 2001, South Africa's planted seed production is estimated at about 139,000 MT, an increase of about 37% from a year earlier. South Africa's new biotechnology developments include : the establishment of an Innovation Hub for modern technologies, a provincial Biotechnology Incubator, a Biotechnology Venture Capital fund, and the draft Biotechnology Strategy.

Includes PSD changes: No
Includes Trade Matrix: No
Annual Report
Pretoria [SF1], SF

Executive Summary

In 2001, South Africa's planting seed area is estimated at about 139,000 MT, an increase of about 37% from a year earlier. The industry could not provide any logical explanation for the sharp increase.

In 2000, SANSOR arranged with Pretoria Technikon to provide training on seed testing and issuance of accredited certificates. The same year, South Africa started new commercial production of herbicide- tolerant cotton and insect-resistant white maize. This follows other GM varieties, Bt insect-resistant cotton and Bt insect-resistant yellow maize, that were initiated in 1997 and 1998 respectively.

South Africa's new biotechnology developments include; the establishment of an Innovation Hub for modern technologies, a provincial Biotechnology Incubator, a Biotechnology Venture Capital Fund, and the draft Biotechnology Strategy.

Historical Perspective

South Africa's first private seed companies were established in the 1890's, with the first public maize-breeding project initiated in 1905. The maize breeding led to a synthetic variety, Kalahari Early Pearl, which became a regional best seller in the 40s and 50s.

These led to the establishment of the Seedsmen's Association of SA in 1943, followed by SA Hybrid Maize Seed Organization (SABO) in 1960, the SA Plant Breeders' Association in 1967, the SA Forage Seeds Association in 1980, and the Seed Analysts Association of SA in 1981. These associations joined forces to establish South African National Seed Organization (SANSOR) in 1989, a spokesbody for the seed industry.

SANSOR makes extensive use of national crop group and technical committees whose members are elected from the industry. The industry, comprising 70 seed companies, cooperatives and farmer seed merchants, as well as over 500 distributors and agencies, ensure fair seed prices, ongoing upgrading of quality standards to meet global requirements, and continuous introduction of new, improved varieties.

The industry is self-sufficient, with an average annual turn-over in seed sales of about US $ 145 million, while exports amount to about US $ 17 million and imports about US $ 7 million. Agronomic field crops dominate the seed market with a share of about 70% with horticultural species at 21%, and forage/pastures at 9%.

Plant Breeders' Rights

The Plant Breeders Right Act of 1976, amended in 1996 to meet the UPOV 1991 requirements, protects South African plant varieties. In December 2000, South Africa registered about 1,653 plant breeders, of which 40% are South African, with the remaining owned by US (15%), Dutch(12%), and Germans(11%).

Seed Certification

South Africa's seed certification is voluntary. Seed certification started as a system for vegetables devised by the government-private sector partnership around 1940, and was extended to other crops under the Seeds Act of 1961. Government coordinated all functions of certification until 1989, when all these functions where transferred to SANSOR. Since its inception, the volume of certified seed has doubled and the area planted to seeds extended to about 97,000 Ha.
SANSOR uses services of private inspectors, who though employed elsewhere, report to SANSOR. They are responsible for the maintenance of a sustainable, and cost-effective seed certification system. The system has been expanded to include phytosanitary field inspections for seed-borne pathogens.

The certificate, seal and label on the container provide a guarantee on seed quality. In the event of poor quality results after testings, the certificate is cancelled and seals and labels are removed from containers.

South Afrca's seed testing is conducted at both private and official testing stations, however, official testing and issuing of official certificates remains SANSOR's responsibilities.

In order for a private laboratory to quality as a testing station, it must meet regulatory requirements, complete academic and practical training on seed analysis, and be accredited by SANSOR. This training is now offered by Technikon Pretoria since calendar year 2000. Currently, South Africa has a total of 26 registered private laboratories.

The Official Seed Testing Station has been a member of the International Seed Testing Association (ISTA) for almost 50 years. It exercises ongoing surveillance over private seed laboratories by way of inspections at laboratory facilities, oversees testing of seed samples and spot checks on commercial seed lots. SANSOR overlooks all the operations.

Biotechnology in South Africa

In 1990, SAGENE, an advisory committee established in 1978 to guide government and seed industry on biotechnology, established biosafety guidelines for genetically modified varieties. About 110 researchgroups were already active in biotechnology R&D, with applications covering almost 160 agricultural projects. Currently over 200 permits have been issued for field trials.

The Genetic Modified Organisms Act of 1997 was established to control all facilities where genetic modification research and development take place, all filed trials, imports, exports, and commercial releases. The Plant Pests Act of 1983 was the principal legislation which dealt with biotechnology issues used before the GMO Act was implemented.

South Africa's first Genetic Modified varieties approved for commercial production was Bt insect-resistant cotton in 1997, followed by Bt insect-resistant yellow maize in 1998, as well as herbicide-tolerant cotton and insect-resistant white maize in 2000. South Africa's Genetically Modified crop production area reached about 200,000 Ha by 2000.

The 2001 proposal by South African Department of Health on labeling requirements for GMO products is still under review. The draft provides for mandatory labeling of food which differs significantly from conventional counterparts in nutritional value, composition, mode of storage, levels of allergens and toxins; as well as whether plant materials contain human or animal genes.

New Developments

South Africa's biotechnology developments include; the establishment of an Innovation Hub for modern technologies, a provincial Biotechnology Incubator, a Biotechnology Venture Capital Fund, and the draft Biotechnology Strategy.

The Biotechnology Strategy highlights the need to obtain increased value from recent advances in biotechnology, stimulation of innovation, backed by education and capacity building with support from government. The three focal areas specifically identified are human health, food production and the environment.

Production

Seeds	1997 (Tons)	1998 (Tons)	1999 (Tons)	2000 (Tons) Actual	2001* (Tons)
Maize	26,600	26,136	29,083	24,396	24,396
Sunflower	2,146	3,477	1,633	2,187	2,400
Grain Sorghum	851	637	890	571	500
Dry Beans	1,552	2,592	2,831	3,070	3,836
Soybeans	4,375	4,567	3,242	4,567	8,150
Groundnuts	1,773	2,836	2,448	4,925	8,209
Cotton	1,000	1,100	500	0	362
Cow Peas	240	240	240	240	600
Wheat	52,500	29,890	31,653	37,913	54,162
Oats	10,500	10,500	10,500	10,500	15,000
Barley	11,088	9,408	8,483	6,467	9,239
Rye	1,804	2,200	2,200	2,200	4,000
Triticale	4,620	4,620	4,620	4,620	8,400
Total	119,049	98,203	98,323	101,656	139,256

* SANSOR's estimates

The 139,000 MT production projected for 2001 by SANSOR needs further evaluation, as there has not been any logical explanation for the sharp increase from previous year. The average production in the past three years has been 105,000 MT, while the area planted to seed only increased marginally by 4% from 2000. FAS Pretoria will continue to seek an explanation for the sharp increase.

Seed Production Area

Seeds	1997 (Mil. Ha)	1998 (Mil. Ha)	1999 (Mil. Ha)	2000 (Mil. Ha)	2001* (Mil. Ha)
Maize	2.96	2.90	3.23	2.71	3.0
Sunflower	0.51	0.83	0.39	0.52	0.50
Grain Sorghum	0.13	0.10	0.14	0.09	0.10
Dry Beans	0.04	0.07	0.07	0.08	0.07
Soybeans	0.13	0.13	0.09	0.13	0.10
Groundnuts	0.06	0.10	0.08	0.17	0.10
Cotton	0.09	0.10	0.05	0.04	0.07
Cow Peas	0.03	0.03	0.03	0.03	0.03
Wheat	1.38	0.68	0.72	0.86	0.90
Oats	0.70	0.70	0.70	0.70	0.70
Barley	0.13	0.11	0.10	0.08	0.10
Rye	0.08	0.10	0.10	0.10	0.10
Triticale	0.12	0.12	0.12	0.12	0.12
Total	6.36	5.97	5.82	5.63	5.90

*Attache Estimates

Trade

Agronomic Seeds

Seeds	1997 (R. Mil)	1998 (R. Mil)	1999 (R. Mil)	2000 (R. Mil)	2001 MT	2001 (R. Mil)
Maize	259.0	292.0	360.0	331	24,396	331
Sunflower	38.7	72.4	37.9	55.9	2,400	61.3
Grain Sorghum	6.8	6.0	9.3	6.4	500	5.6
Dry Beans	12.4	22.8	27.2	31.9	3,838	39.9
Soybeans	19.3	21.8	24.1	26.5	8,150	47.2
Groundnuts	7.8	13.6	12.9	28.5	8,209	47.6
Cotton	5.0	6.6	3.4	4.7	362	3.2
Cow Peas	0.6	0.7	0.8	0.9	600	2.4
Wheat	109.2	77.6	86.0	118.0	54,162	171.1
Oats	21.0	23.5	24.6	25.2	15,000	36.0
Barley	18.6	16.9	17.7	14.7	9,239	21.1
Rye	3.4	4.6	4.8	5.0	4,000	9.1
Triticale	8.3	9.2	9.7	10.1	8,400	18.4
Total	510.10	567.70	618.40	658.80	139,256	793.9

Source: SANSOR

Forage Seeds

Crop Type	2000			2001	
	D. Consump (T)	Exports (T)	Total sales (T)	Total sales (T)	Value (R. Mil)
Pearl Millet	450	100	550	800	1.9
Blue Buffalo Grass	30	0.5	30.5	30	1.2
Bottlebrush Grass	10	2	12	10	0.2
Oats	4,400	10	4,410	4,000	10.8
Kikuyu	8.5		8.5	5	1.5
Clovers	25		25	35	1.1
Triticale	1,550		1,550	600	1.6
Cocksfoot	10		10	10	0.25
Common Cynodon	35		35	35	1.75
Tall Fescue	40		40	40	1.0
Lupins	1,000	950	1,950	1,000	2.5
Lucern	750		750	750	22.5
Weeping Love Grass	300	150	450	800	11.0
Dallis Grass	5		5	10	0.5
Other legume Crops	375	15	390	150	5.0
Phalaris	9		9	5	0.17
Annual Rye Grass	1,500		1,500	1,000	8.0
Perennial Rye Grass	85		85	100	2.4
Rhodes Grass	50	140	190	50	2.0
Rye	700		700	1,250	3.75

Smuts Finger Grass	100	20	120	75	1.8
Teff	1,000		1,000	750	2.4
Fodder Radish	56		56	56	0.9
Forage Sorghum	2,000		2,000	1,200	3.4
Perennial Forage Sorghum	100		100	100	0.95
White Buffalo Grass	55		55	30	1.65
Cowpea				750	2.55
General	150		150	150	1.5
TOTAL	14,794	1,388	16,181	13,791	94.27

Source: SANSOR

Horticultural Seeds

2000		2001		2000		2001	
Commodity	US $ million value	Sales Volume (Tons)	US $ million value	Commodity	US $ million value	Sales Volume (Tons)	US $ million value
Beans	11.5	250	1.50	celery	0.5	0.2	0.05
Beet	4.5	33	0.43	spinach	0.5	15	0.07
Brassicas	18.0	14	2.10	Eggplant	0.3	0.8	0.05
Cantaloupe	9.0	1.2	1.25	Turnips	0.3	3.0	0.03
Carrot	13.0	100	1.50	Asparagus	0.4	0.8	0.04
Cucurbits	14	88	2.40	Spring onion	0.8	5.0	0.12
Cucumber	7.0	3.0	0.93	Herbs	0.2	0.8	0.05
Lettuce	4.0	4.0	0.50	Okra,artichoke,Rhubarb	0.3	3.0	0.03
Onion	21.0	100	3.20	TOTAL		1,053	21.89
Pea	3.0	360	0.40				
Peppers	15.0	14	1.80				

Sweetcorn	8.5	50.0	1.45				
Tomato	24.0	3.0	3.70				
watermelon	3.0	4.5	0.30				

Source: SANSOR
Exchange Rate(2001) : $1 = R10.00

Policy

The Plant Improvement Act, 1976(Act 53 of 1976) contains the basic framework for orderly functioning of the seed and plant propagating material industries. The Act excludes the regulations of minor species. It requires premises of seed cleaners and traders to be registered, set minimum germination and purity standards for seed offered for sale, and for labeling standards; makes provision for official variety lists for major species, and for voluntary participation in seed certification schemes, as well as requirements for private seed testing laboratories.

The Agricultural Pests Act, 1976(Act 36 of 1983) regulates requirements for plant health and phytosanitary issues.

The Plant Breeders' Rights Act(Act 15 of 1976, updated 1996) addresses the UPOV 91 requirements, and grants breeders' rights protection for new plant varieties meeting distinctness, uniformity and stability standards.

The Agro-chemicals, Fertilizers and Animal Remedies Act (Act 36 of 1947) regulates the applications of crop protection chemicals, including seed treatments.

The Genetically Modified Organisms Act, 1997 (Act 15 of 1997) regulates all facilities for genetic modification experimentation, R&D projects, contained use, field trials, imports, exports and commercial release of all genetically modified organisms.